



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/455,662	12/07/1999	STEFANO OLIVIERI	PHN-17.446	5446
24737	7590	01/11/2005	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			VO, TUNG T	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/455,662

**Applicant(s)**

OLIVIERI, STEFANO

**Examiner**

TUNG T. VO

**Art Unit**

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Appeal Conference***

1. Based upon the appeal conference on 01/07/2005, the supervisors, Chris. Kelley, Chris. Grant, and primary examiner, Tung Vo, agreed that the Linzer reference does not particularly teach the claimed limitation that argued by the applicant as stated in the appeal brief dated 10/27/2004. However, the claimed limitation is unpatentable over the prior art as shown in the Office Action below.

### ***Response to Arguments***

2. In view of the appeal brief filed on 10/27/2004, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

3. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linzer (US 6,108,039) in view of Astle (US 5,818,969).

Re claims 1-3, Linzer discloses a device and its method for recursive motion vector estimation comprising a) for a current block of a picture divided into a plurality of blocks (col. 1, lines 28-33), and based on motion information generated for the previously-processed if any (col. 2, line 65-col.3, line 9; see also col. 9, line 46-col. 10, line 16) and if immediately to the left said current block (Top Left to top left, col. 9, lines 51-67), the block being processed by said method in a predetermined order (zigzag order, left to right, top to bottom);

b) means (610 of fig. 5) for selecting one of these candidate vectors to generate a selected vector (ME0-MVT is generated by motion vertical field select(610 of fig. 5));

c) means (Top to top OR Bottom to top SEARCH of fig. 5) for generating a plurality of test vector from the selected vectors (the selected ME0-MVT is generated by ME2 ¼ and Top to top Search to produce ME20-MVT as called a test vector);

d) means (650 of fig. 5) for select one of the test vectors to generate output vector (a single motion vector ME2-MVT is selected from the test vectors ME20-MVT);

e) means for storing output vector (20 of fig. 2, e.g. the selected test vector is stored in the buffer (28) with the encoded video data).

Art Unit: 2613

f) Linzer further discloses means (col. 22, lines 5-6) for re-executing the steps above, which is called a recursive motion vector estimation; wherein adding  $-1$ ,  $0$ , or  $+1$  to each component ( $8 \times 8$  or  $4 \times 4$ ) of the selected vectors into the selecting test vector (col. 10, lines 38-51, searching macroblock start at  $(0,0)$  to the right  $(0, +1)$ , to the left  $(0, -1)$ , to the top  $(0, +1)$ , to the bottom  $(0, -1)$ , see also table 2 in col. 10).

It is noted that Linzer does not particularly discloses means for generating a plurality of candidate vectors from stored vectors, the previous processed block or motion vectors as claimed.

However, Astle teaches means for generating a plurality of candidate vectors from stored vectors, the previous processed block or motion vectors (col. 10, lines 1-50, e.g. the candidate vectors are chosen from the previous vector  $V_x$  and  $V_y$ , wherein the previous vectors  $V_x$  and  $V_y$  are determined by the motion estimation).

Therefore, taking the teachings of Linzer and Astle as a whole. It would have been obvious to one of ordinary skill in the art to incorporate the teachings of Astle into the method of Linzer to generate the candidate vectors from the previous vectors so this greatly improves the efficiency of the search.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the previous Office Action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUNG T. VO whose telephone number is 703-308-5874. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris. Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**TUNG T. VO**  
**PATENT EXAMINER**  
T.Vo

TUNG T. VO  
Primary Examiner  
Art Unit 2613